WHAT IS CLAIMED IS:

1.   A method of optimizing at least two target machines, comprising the steps of:

abstracting a rule of instruction scheduling for each of said at least two target machines;

generating a hypothetical machine based on said rule of instructions; and

targeting said hypothetical machine.

2.   The method of claim 1 wherein a rule of instruction scheduling for said hypothetical machine is a restrictive set of said abstracted rules of instruction scheduling of said at least two target machines.

3.   The method of claim 1 further including the steps of:

detecting a conflict between said abstracted rules of instructions; and

resolving said conflict.

4.   The method of claim 3 wherein said step of resolving said conflict includes the step selecting the less damaging option of said detected conflict.

5.   The method of claim 3 wherein said detected conflict corresponds to a conflict between a rule of instruction of one of said at least two target machines and a rule of instruction of another of said at least two target machines.

6.   The method of claim 1 further including the steps of:

modeling each of said at least two target machines; and

retrieving scheduling information corresponding to each of said at least two target machines.

7.   The method of claim 1 wherein said at least two target machines include an UltraSPARC-II configured to operate at a speed of 360 MHz and an UltraSPARC-III configured to operate at a speed of 600 MHz.

8.   A method of optimizing at least two target machines, comprising the steps of:

retrieving scheduling information corresponding to each of said at least two target machines;

abstracting a rule of instruction scheduling for each of said at least two target machines;

generating a hypothetical machine based on said rule of instructions; and

targeting said hypothetical machine.

9.   The method of claim 8 further including the steps of:

detecting a conflict between said abstracted rules of instructions; and

resolving said conflict.

10.   The method of claim 9 wherein a rule of instruction scheduling for said hypothetical machine is a restrictive set of said abstracted rules of instruction scheduling of said at least two target machines.

11.   The method of claim 9 wherein said step of resolving said conflict includes the step selecting the less damaging option of said detected conflict.

12.   The method of claim 9 wherein said detected conflict corresponds to a conflict between a rule of instruction of one of said at least two target machines and a rule of instruction of another of said at least two target machines.

13.   An apparatus for optimizing at least two target machines, comprising:

means for abstracting a rule of instruction scheduling for each of said at least two target machines;

means for generating a hypothetical machine based on said rule of instructions; and
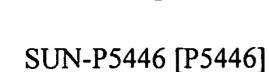
-22-

means for targeting said hypothetical machine.

14.   The apparatus of claim 13 wherein a rule of instruction scheduling for said hypothetical machine is a restrictive set of said abstracted rules of instruction scheduling of said at least two target machines.

15.   The apparatus of claim 13 further including:

means for detecting a conflict between said abstracted rules of instructions; and

means for resolving said conflict.

16.   The apparatus of claim 15 wherein said resolving means includes means for selecting the less damaging option of said detected conflict.

17.   The apparatus of claim 15 wherein said detected conflict corresponds to a conflict between a rule of instruction of one of said at least two target machines and a rule of instruction of another of said at least two target machines.

18.   The apparatus of claim 13 further including:

means for modeling each of said at least two target machines; and

means for retrieving scheduling information corresponding to each of said at least two target machines.

19.   An apparatus for optimizing at least two target machines, comprising:

means for retrieving scheduling information corresponding to each of said at least two target machines;

means for abstracting a rule of instruction scheduling for each of said at least two target machines;

means for generating a hypothetical machine based on said rule of instructions; and

means for targeting said hypothetical machine.

20.   An apparatus for optimizing a plurality of target machines, comprising:

means for modeling a plurality of target machines;

5   means for retrieving scheduling information corresponding to each of said plurality of target machines;

means for abstracting a rule of instruction scheduling for each of said plurality of target machines;

means for generating a hypothetical machine based on said rule of

10   instructions;

means for targeting said hypothetical machine;

means for detecting a conflict between said abstracted rules of instructions; and

means for resolving said conflict.

15